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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/806,457
Filing Date: June 14, 2001
Appellant(s): CASPERSEN, CHRISTIAN

Mark A. Harper
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 30 April 2010 appealing from the Office action mailed 22 September 2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application: claims 1, 7, 9, 11, 12, 15, 16, 23, 24, 27, 29, 36, 37, 44, and 47-51.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

4,744,663	HAMASHIMA *et al.*	5-1988
5,377,002	MALIN *et al.*	12-1994
5,381,224	DIXON *et al.*	1-1995
5,479,252	WORSTER *et al.*	12-1995
6,049,421	RAZ *et al.*	4-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 7, 9, 11, 12, 23, 24, 27, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malin et al. (US 5,377,002) in view of Hamashima et al. (US 4,744,663).

The claim limitation "scanning means for scanning the specimen in relation to the detector" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The scanning means may comprise a DC motor and a spindle rigidly connected to the DC motor" in lines 32-33 on pg. 4 and "The scanning means may also comprise deflecting means that may comprise a servo motor or a stepper motor connected to the member holding the specimen and thereby adapted to scan the first light beam

along a radius of the circular movement of the disc holding the specimen" in lines 2-5 on pg. 5) and equivalents thereof (MPEP § 2181).

The claim limitation "means for rotating the member" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The scanning means may comprise a DC motor and a spindle rigidly connected to the DC motor" in lines 32-33 on pg. 4) and equivalents thereof (MPEP § 2181).

The claim limitation "means for displacing the member along a radius of the rotation of the member" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The scanning means may also comprise deflecting means that may comprise a servo motor or a stepper motor connected to the member holding the specimen and thereby adapted to scan the first light beam along a radius of the circular movement of the disc holding the specimen" in lines 2-5 on pg. 5) and equivalents thereof (MPEP § 2181).

The claim limitation "scanning control means for controlling the scanning means for scanning the specimen" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The scanning control means may comprise servo means adapted control the rpm of the disc, to produce a substantially constant linear velocity of the laser spot on the disc surface, a principle well known from CD players" in lines 27-29 on pg. 16) and equivalents thereof (MPEP § 2181).

The claim limitation "storage means for storing detector signals relating to the marked objects provided by the detector and corresponding position signals provided by the scanning control means" is

being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The storage means may comprise magnetic, optic or electric storage media, such as hard disc drives, DAT-tapes, floppy discs, CD-ROM discs, EEPROMs, etc. which may be utilised for non-volatile storage of the coherent data sets obtained from the scanning of the specimen(s). The storage means may also comprise intermediate volatile storage means, preferably RAM, to store coherent data sets during the scanning" in lines 9-14 on pg. 14) and equivalents thereof (MPEP § 2181).

The claim limitation "means for retrieving the position signals stored in the storage means" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "The storage means may be located in a personal computer (PC), which is operationally connected with the apparatus of the present invention" in lines 8-9 on pg. 14) and equivalents thereof (MPEP § 2181).

It should be noted that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)) if the prior art apparatus teaches all the structural limitations of the claim (MPEP § 2114). Thus, "wherein the marked objects are marked with a fluorescent stain" was not given any patentable weight since the object marked by a fluorescent stain is not a component of the claimed apparatus and does not appear to impose any additional structural limitations on the claimed apparatus.

In regard to claim **1**, Malin *et al.* disclose (Fig. 1) an apparatus for identifying a position of objects having unknown positions and detecting a property of the objects contained in a specimen (11), the apparatus comprising:

(a) a frame (28.1);

(b) a member (13) positioned on the frame (28.1) and having a surface that is adapted to receive and hold the specimen (11);

(c) at least a first light source (2) for emitting at least a first light beam (1) towards the specimen (11) held by the member (13), wherein the first light beam (1) is adapted to provide a light spot (12) having a diameter on the specimen (11);

(d) at least one beam-splitter (18 or 62 in Figs. 1 and 4a) being arranged to reflect the first light beam (1) towards the specimen (11);

(e) at least a detector (19) for detecting light (14, 15) emitted from the objects upon interaction with the first light beam (1), the first light source (2) and the detector (19) being arranged so that a part of a light beam path from the first light source (2) to the specimen (11) is co-axial (along optical axis 34) with a part of the light (14, 15) emitted from the objects;

(f) scanning means (27.1, 27, 27.2, 28.2, 28) for scanning the entire surface of the member (13) in relation to the detector (19) along a non-linear curve (*e.g.*, " ... the whole of the surface is scanned along a spiral path ... "; column 10, lines 26-29), wherein the scanning means (27.1, 27, 27.2, 28.2, 28) comprises means (shaft 27.1 of a rotary motor 27) for rotating the member (13) and means (linear stage 27.2 on a spindle 28.2 of translation motor 28) for displacing the member (13) along a radius

of the rotation of the member (13), so as to identify the position of the objects in the entire specimen (11) and detect the property of the objects, the means (27.1, 27) for rotating and the means (27.2, 28.2, 28) for displacing being directly connected to the member (13), the member (13) being rotatable and displaceable along a radius of the rotation of the member (13);

(g) scanning control means (computer unit 22, interface 26, rotation-pulse emitter 29, translation-pulse emitter 30) for controlling the scanning means (27.1, 27, 27.2, 28.2, 28) for scanning the specimen along the non-linear curve (column 10, lines 26-29);

(h) storage means (computer unit 22, mass-storage system 23) for storing detector signals (column 9, lines 35-40) relating to the objects provided by the detector (19) and corresponding position signals (column 9, lines 41-45) provided by the scanning control means (22, 26, 29, 30);

(i) means (computer unit 22) for retrieving the position signals stored in the storage means (22, 23), and

(j) a microscope (*e.g.*, " ... scanning laser-beam microscope ... "; column 5, lines 17-23) for viewing images of the objects, wherein the scanning control means uses the retrieved position signals to place the microscope at the position of the objects to allow performing a detailed examination of the objects (column 12, lines 61-68).

The apparatus of Malin *et al.* lacks to filter through the beam-splitter fluorescent light emitted from the specimen, thereby allowing fluorescent light from fluorescently marked objects to pass through the beam-splitter to the detector and an explicit description that

the light spot diameter is between 20-150 μm. However, Malin *et al.* also disclose (column 12, lines 48-54) that the " ... unit of measurement used for LPDs is the μmLSE (=micron latex-sphere equivalent), where 1 μmLSE is the diffused-light amplitude produced by a latex sphere of 1 μm diameter ... ", (column 8, lines 30-33) that " ... LPDs are relatively small in relation to the light spot ... ", and (column 2, lines 57-62) that "In scanning, the astigmatic light beam produced by the switchable lens system covers a larger area and thus permits a larger feed offset from one revolution to the next. On the other hand, the dot-shaped light beam is used with a small feed offset and makes possible high local resolution". That is, a light spot diameter of >1 μm (*e.g.*, 50 μm) is taught or suggested by Malin *et al.* since the diameter of the light spot is larger than LPDs having diameters in units of micrometers (*e.g.*, 1 μm). Further, Hamashima *et al.* teach (column 4, lines 47-59) to provide a dichroic mirror (24 in Fig. 1) for simultaneously detecting three kinds of light information (*i.e.*, the scattered light from the edge of the pattern, the reflection from the pattern and the fluorescence or phosphorescence from the pattern) so that by using these three kinds of light information and the scanning position information of the beam spot, the desired edge detection, pattern position detection and line width and dimension measurement of the different patterns (*e.g.*, the photoresist pattern and the polysilicon pattern) are performed in a diversified manner. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a dichroic mirror as one of the at least one beam-splitter and other optical components in the apparatus of Malin *et al.*, in order to obtain reflection, scattering, and fluorescence measurements at a desired resolution (*e.g.*, from a 50 μm

light spot diameter) so as to determine defects and contamination in a diversified manner.

In regard to claim **7** which is dependent on claim 1, Malin *et al.* also disclose (Fig. 1) that the member (13) is positioned for rotation about an axis on the frame (28.1) and wherein the means (27.1, 27) for rotating the member (13) rotates the member (13) about the axis.

In regard to claim **9** which is dependent on claim 1, Malin *et al.* also disclose (Fig. 1) that the scanning control means (22, 26, 29, 30) are adapted to control the scanning means (27.1, 27, 27.2, 28.2, 28) in such a way that the non-linear curve is a substantially circular curve (*e.g.*, " ... the whole of the surface is scanned along a spiral path ... "; column 10, lines 26-29).

The claim limitation "means for sampling and digitising the detector signals and the position signals" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "Each of these digitised detector and position signals is, preferably, represented by a series of digital samples generated by one or several A/D-converters" in lines 13-15 on pg. 9) and equivalents thereof (MPEP § 2181).

In regard to claim **11** which is dependent on claim 1, Malin *et al.* also disclose (Figs. 1 and 5a) means (analog-digital converter 78, rotation-pulse emitter 29, translation-pulse emitter 30) for sampling and digitizing the detector signals and the position signals.

The claim limitation "signal processing means operatively connected to the detector to detect a presence of an object based on the detector signals" is being treated under 35 U.S.C. 112, sixth paragraph and has been construed to cover the corresponding structure described in the specification (*e.g.*, "Signal processing means may subsequently retrieve and use these corresponding coherent data sets to enhance the discrimination between signals originating from target objects and false positive signals" in lines 7-9 on pg. 11 and "The storage means may be located in a personal computer (PC), which is operationally connected with the apparatus of the present invention" in lines 8-9 on pg. 14) and equivalents thereof (MPEP § 2181).

In regard to claim **12** which is dependent on claim 1, Malin *et al.* also disclose (Fig. 1) signal processing means (analyzer electronics 21, computer unit 22) operatively connected to the detector (19) to detect a presence of an object based on the detector signals.

In regard to claim **23** which is dependent on claim 1, Malin *et al.* also disclose (Fig. 1) that a mask (16) is inserted in the optical path between the specimen (11) and the detector (19), wherein the mask (16) comprises at least one transparent aperture (*e.g.*, a slit; column 7, lines 25-29).

In regard to claim **24** which is dependent on claim 23, Malin *et al.* also disclose (Fig. 1) that aperture is a substantially rectangular shape (*e.g.*, a slit; column 7, lines 25-29).

In regard to claim **27** which is dependent on claim 1, Malin *et al.* also disclose (Fig. 1) that the first light source (2) is a coherent light source (*e.g.*, 488 nm laser; column 4, lines 8-12).

In regard to claim **48** which is dependent on claim 1, Malin *et al.* also disclose that the position signals of the marked objects are angular and radial coordinates (*i.e.*, " ... polar coordinates ... "; column 10, lines 11-13).

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malin et al. in view of Hamashima et al. as applied to claim 1 above, and further in view of Worster et al. (US 5,479,252).

In regard to claims **15** and **16** which are dependent on claim 1, the modified apparatus of Malin *et al.* lacks an explicit description that the specimen has an area larger than 500 mm^2 (*e.g.*, larger than 8000 mm^2). However, Malin *et al.* also disclose (column 1, lines 18-22) that the specimen is, *e.g.*, a substrate for optical applications or a wafer. Since Malin *et al.* do not disclose and/or require a specific specimen, one having ordinary skill in the art at the time of the invention would reasonably interpret the unspecified specimen of Malin *et al.* as any one of the known conventional specimens that did not require a detailed description. Further, Worster *et al.* teach (column 4, lines 58-60) that wafer diameters range from 75 mm to 200 mm. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a known conventional specimen (*e.g.*, 200 mm diameter wafer) as the unspecified specimen in the modified apparatus of Malin *et al.*

Claims 29, 36, 37, 47, and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malin et al. (US 5,377,002) in view of Hamashima et al. (US 4,744,663) and Dixon et al. (US 5,381,224).

In regard to claims **29**, **36**, **47**, and **49-51**, the cited prior art is applied as in claims 1 and 48 above. The method of Malin *et al.* lacks that the object is a fluorescently marked biological cell or a fluorescently marked microorganism and wherein the specimen has an area larger than 500 mm^2 (or larger than 8000 mm^2). Dixon *et al.* teach (column 1, lines 5-20; column 3, lines 10-61) that an apparatus for measuring both scattered light and fluorescence can be used for both macroscopic semiconductor specimens and macroscopic biomedical specimens (*i.e.*, macroscopic specimens having a size larger than 1 mm X 1 mm). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention that the modified method of Malin *et al.* can be used for both macroscopic semiconductor specimens and macroscopic biomedical specimens (*e.g.*, a macroscopic biomedical specimen comprising fluorescently marked biological cells).

In regard to claim **37** which is dependent on claim 36, the cited prior art is applied as in claim 11 above.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malin et al. in view of Hamashima et al. as applied to claim 1 above, and further in view of Raz et al. (US 6,049,421).

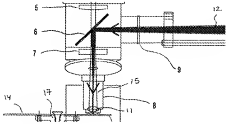
In regard to claim **44** which is dependent on claim 1, the modified apparatus of Malin *et al.* lacks an explicit description that the detector comprises a CCD device. Since Malin *et al.* do not disclose and/or require a specific detector, one having ordinary skill in the art at the time of the invention would reasonably interpret the unspecified detector of Malin *et al.* as any one of the known conventional detectors that did not

require a detailed description. Further, Raz *et al.* teach (column 2, lines 26-37) to provide a CCD device for scanning a substrate in order to obtain reasonable speed resolution. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a known conventional detector (*e.g.*, a CCD) as the unspecified detector in the modified apparatus of Malin *et al.*

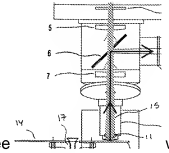
(10) Response to Argument

Claimed Invention

It should be noted that pending claims must be given their broadest reasonable interpretation consistent with the specification (MPEP § 2111). The specification discloses that a light beam 12 (*e.g.*, light beam 12 has wavelength λ_{EX} of " ... 488 nm ... "; pg. 17, lines 5-15) is deflected by an optical element 6 onto sample 14 (*e.g.*, see



wherein a copy of a portion of the sole Fig. has the light beam 12 emphasized in black). The specification also discloses that resultant light 15 (*e.g.*, that " ... may comprise a light component originating from a reflected portion of the first light beam 12 and a fluorescent light component emitted from fluorescent target objets (not shown) contained in the specimen 14 ... "; pg. 17, lines 5-15) have a first component (*e.g.*, originating from the laser source with wavelength λ_{EX}) and a second component (*e.g.*, originating from fluorescent objects with wavelength λ_{EM}). The specification further discloses that the first component is filtered (*i.e.*, that " ... dichroic beam-splitter 6 and the dichroic filter 4 both

contribute to attenuate the light component originating from the laser source, thereby enhancing the signal to noise ratio of light transmitted to the photo-multiplier 1 ... "; pg. 17, lines 5-15) by the optical element 6 and that the second component with wavelength λ_{EM} passes through the optical element 6 (*e.g.*, see 

wherein a copy of a portion of the sole Fig. has a first component of the resultant light 15 emphasized in black and a second component of the resultant light 15 emphasized in gray). It is important to recognize that the optical element 6 filter (*i.e.*, "attenuate" by deflecting) the first light component originating from the laser source with wavelength λ_{EX}, in order to enhance the signal to noise ratio.

1A: arguments on pp. 5-11 in the Appeal Brief filed 30 April 2010

Appellant argues that appellant incorporates by reference comments made of record in the pre-appeal brief request statement made of record 21 December 2009. Appellant's arguments are not persuasive for the reasons previously discussed and also for the reasons discussed below.

Appellant also argues that the combination of the cited prior art does not teach or suggest a light spot having a diameter between 20-150 μm and thus the rejection is based on upon improper hindsight reasoning. In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a

reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Malin *et al.* state (column 12, lines 48-54) that the " ... unit of measurement used for LPDs is the μmLSE (=micron latex-sphere equivalent), where 1 μmLSE is the diffused-light amplitude produced by a latex sphere of 1 μm diameter ... " and (column 8, lines 30-33) that " ... LPDs are relatively small in relation to the light spot ... ". Thus Malin *et al.* expressly teach a light spot relatively large in relation to a latex sphere of 1 μm diameter. That is, Malin *et al.* expressly teach a light spot having a diameter greater than 1 μm. Further, MPEP § 2144.05 indicates that in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. Therefore, a *prima facie* case of obviousness exists because the claimed range of 20-150 μm lies inside range >1 μm disclosed by the prior art.

Appellant further argues that the claimed 20-150 μm spot diameter is critical as a trade-off between the best signal-to-noise ratio and the fastest scan. Examiner respectfully disagrees. Appellant fails to provide any evidence to show that the claimed range achieves unexpected results relative to the prior art range (MPEP § 2144.05). On the contrary, the specification states (pg. 7, lines 21-26) that " ... the spot diameter is adapted to a particular application so that an optimum signal to noise ratio is provided in the detector signal, thereby enhancing the discrimination between target objects and false positive signals ... ". Thus the specification expressly teaches that the spot diameter is adapted to a particular

application. Therefore, appellant's arguments are not persuasive because appellant fails to show the criticality of the claimed range.

In response to appellant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, there is some teaching, suggestion, or motivation to do so found in the references themselves. As discussed above, a *prima facie* case of obviousness exists because the claimed range of 20-150 μm lies inside range >1 μm disclosed by the prior art. In addition, Malin *et al.* state (column 2, lines 57-62) that in " ... scanning, the astigmatic light beam produced by the switchable lens system covers a larger area and thus permits a larger feed offset from one revolution to the next. On the other hand, the dot-shaped light beam is used with a small feed offset and makes possible high local resolution ... ". Thus, Malin *et al.* expressly teach that light spot size is selected depending on the desired scanning resolution. That is, Malin *et al.* expressly teach that the spot size is a result-effective variable (MPEP § 2144.05), and one of ordinary skill in the art would have a reasonable expectation of success in achieving a desired scanning resolution by following the express teaching of Malin *et al.* to adjust the spot size. Therefore, it would have been obvious to one having ordinary

skill in the art at the time of the invention to adjust the spot size in the apparatus of Malin *et al.*, in order to achieve a desired scanning resolution.

1B: arguments on pp. 11-14 in the Appeal Brief filed 30 April 2010

Appellant argues that substitution of the dark-field stop 61 of Malin *et al.* with the dichroic mirror 24 of Hamashima *et al.* would destroy the function of the dark-field deflection system 8 of Malin *et al.* Examiner respectfully disagrees. In this case, Malin *et al.* teach (column 5, lines 51-53) that " ... centre of the dark-field stop's carrier plate is coated with a material that reflects the light of beam 1 ... ". Thus the dark-field stop 61 of Malin *et al.* is only required to reflect laser wavelength λ_{EX}. It is important to recognize that a regular reflection from a sample surface have a wavelength $\lambda_{reflection}$ that is the same as the laser wavelength λ_{EX} whereas fluorescent wavelength λ_{EM} is greater than the laser wavelength λ_{EX} (*e.g.*, see " ... fluorescence is generally a visible light having a wavelength of 500 to 700 nm and it is longer in wavelength than the laser beam ... " in lines 22-24 of Hamashima *et al.* column 4). In regard to the function of a dark-field deflection system, Malin *et al.* teach (column 6, lines 48-53) that " ... the light beam 1 strikes the substrate perpendicularly to its surface 10, the surface 10 reflects the light exactly along the incident light beam 1 so that it again passes through the objective back to the dark-field stop 61, which in turn deflects it back to the light source 2 ... ". Thus the dark-field stop 61 of Malin *et al.* reflects the regular reflection from sample surface 10. Further, Hamashima *et al.* teach (column 4, lines 8-12) that a " ... regular reflection from the wafer W is reflected by the dichroic mirror 24 ... ". Thus the dichroic mirror 24 of Hamashima *et al.* provides the identical function of reflecting the regular reflection from a sample surface. Therefore when the dark-field stop 61 of Malin *et al.* is

substituted with the dichroic mirror 24 of Hamashima *et al.*, the functions (*i.e.*, function A: deflect light beam 1 to surface 10; and function B: deflect the regular reflection from the surface 10) of the dark-field deflection system 8 of Malin *et al.* are the same.

Appellant also argues that Examiner has failed to give the 11 August 2009 37 CFR 1.132 declaration proper consideration. Examiner respectfully disagrees. In this case, the apparatus of Malin *et al.* has the following optical geometrical features: (a) incident light intensity is not reduced by a patch stop (*e.g.*, see Fig. 1c); (b) the light strikes a first sample surface at angles that is perpendicular to the first sample surface (*e.g.*, that " ... the light beam 1 strikes the substrate perpendicularly to its surface 10 ... "; column 6, lines 48-53); and (b) resultant light is collected from the first sample surface (*e.g.*, see Figs. 2a-2c). The 11 August 2009 37 CFR 1.132 declaration's Fig. 1 illustrates the following optical geometrical features: (a) incident light intensity is reduced by a patch stop; (b) the light strikes a first sample surface at angles that is not perpendicular to the first sample surface; and (b) resultant light is collected from a second sample surface different from the first sample surface. Thus, there were significant differences between the optical geometry described in the 11 August 2009 37 CFR 1.132 declaration and the optical geometry of Malin *et al.* MPEP § 716.02(e) indicates that where a comparison is not identical with the reference disclosure, deviations therefrom should be explained. However, not only were the deviations between the apparatus of Malin *et al.* and the 11 August 2009 37 CFR 1.132 declaration's optical geometry not explained, the 11 August 2009 37 CFR 1.132 declaration specifically declares that the "Malin et al. system is configured according to the following figure" (*i.e.*, Fig. 1). In view of the foregoing, when all of

the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness as for at least the reasons discussed above and also for the reasons discussed in detail in the Office action mailed 22 September 2009.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/David P. Porta/

Supervisory Patent Examiner, Art Unit 2884

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